In the Claims

Claim 1 (Currently amended): A polymer material comprising a polyolefin, wherein said polyolefin comprises only hydrocarbons, wherein said polyolefin contains α-olefin as a monomer and ethylene as a comonomer, wherein said α-olefin is present within said polyolefin in an amount from about 50% to about 75% by weight, wherein said ethylene comonomer is present within said polyolefin in an amount from about 25% by weight to about 50% by weight, and wherein said polymer material exhibits temperature-sensitive permeability.

Claim 2 (Cancelled)

Claim 3 (Currently amended): The polymer material, according to claim 1, wherein said ~~polyolefin contains an~~ α-olefin monomer is from about 4 carbon atoms to about 12 carbon atoms in length.

Claim 4 (Cancelled)

Claim 5 (Currently amended): The polymer material, according to claim 1, wherein said ~~polyolefin contains an~~ α-olefin monomer is selected from the group consisting of 1-butene, 1-pentene, 1-hexene, 1-heptene, 1-octene, 1-nonene, 1-decene, 1-undecene, and 1-dodecene.

Claim 6 (Currently amended): The polymer material, according to claim 5, wherein said α-olefin monomer is 1-dodecene.

Claim 7 (Original): The polymer material, according to claim 1, wherein the oxygen permeability of said polymer material increases at least about 1.5-fold over a temperature range of about 10° C, within the temperature range of about 0° C to about 40° C.

Claim 8 (Original): The polymer material, according to claim 1, wherein the oxygen permeability of said polymer material increases at least about 2-fold over a temperature range of about 10° C, within the temperature range of about 0° C to about 40° C.

Claim 9 (Original): The polymer material, according to claim 1, wherein the oxygen permeability of said polymer material increases at least about 3-fold over a temperature range of about 10°C, within the temperature range of about 0° C to about 40° C.

Claims 10-11 (Cancelled)

Claim 12 (Original): The polymer material, according to claim 1, wherein said polymer material is a film.

Claims 13-48 (Cancelled)